



FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:	1-800-654-6911 (OUTSIDE USA: 1-423-780-2970)
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300 (OUTSIDE USA: 1-703-527-3887)
FOR ALL MSDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS (OUTSIDE USA: 1-423-780-2347)

**PRODUCT NAME: HTH® FILTER CLEANER**

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Arch Chemicals, Inc. 501 Merritt 7 PO Box 5204 Norwalk, CT 06856-5204</b>	REVISION DATE:	07/21/2009
	SUPERCEDES:	09/11/2007
	MSDS Number:	000000003648
	SYNONYMS:	None
	CHEMICAL FAMILY:	Organic aqueous solution
	DESCRIPTION / USE:	Filter cleaner
	FORMULA:	NOT APPLICABLE/MIXTURE

## 2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	<b>Corrosive to eyes, Moderate skin irritant, Mucous membrane irritant</b>
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Routes of Entry:	Inhalation, skin, eyes, ingestion
Chemical Interactions:	No known or reported interactions.
Medical Conditions Aggravated:	None known or reported

### Human Threshold Response Data

Odor Threshold	Not established for product.
Butoxyethanol	0.1 ppm
Irritation Threshold	Not established for product.

### Hazardous Materials Identification System / National Fire Protection Association Classifications

<u>Hazard Ratings :</u>	<u>Health</u>	<u>Flammability</u>	<u>Physical / Instability</u>	<u>PPI / Special hazard.</u>
HMIS	3	0	0	
NFPA	3	0	0	



Immediate (Acute) Health Effects

Inhalation Toxicity: Not expected to be toxic by inhalation. Inhalation of mist or vapor may cause irritation to the mucous membranes of the respiratory tract. Any irritation would be transient with no permanent damage expected.

Skin Toxicity: Slightly toxic by skin contact. Skin contact may cause moderate irritation consisting of transient redness and swelling. This irritant effect would not be expected to result in permanent damage.

Eye Toxicity: Corrosive. Burns can occur following exposure. Direct contact may cause impairment of vision, corneal damage and/or blindness. Rinsing of the eye should take place immediately.

Ingestion Toxicity: Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Slightly toxic if swallowed.

Acute Target Organ Toxicity: This product is corrosive to the eyes, moderately irritating to the skin and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Prolonged (Chronic) Health Effects

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Reproductive and Developmental Toxicity: No reproductive or developmental risk to humans is expected from exposure to this product.

Inhalation: There are no known or reported effects from chronic exposure except for effects similar to those experienced from acute exposure.

Skin Contact: Prolonged or repeated exposure may cause severe irritation.

Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.

Sensitization: This material is not known or reported to be a skin or respiratory sensitizer.

Chronic Target Organ Toxicity: This product has not been tested. However, chronic (repeated) exposures to this product would be expected to produce similar effects as seen from acute exposures.

Supplemental Health Hazard Information : No additional health information available.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

<u>CAS OR CHEMICAL NAME</u>	<u>CAS #</u>	<u>% RANGE</u>
Citric Acid	77-92-9	1 - 6
Butoxyethanol	111-76-2	5 - 10



ETIDRONIC ACID	2809-21-4	5 - 10
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.- (NONYLPHENYL)-.	9016-45-9	5 - 10
Water	7732-18-5	64 - 84

#### 4. FIRST AID MEASURES

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Inhalation:	IF INHALED: Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops.
Skin Contact:	IF ON SKIN: Immediately flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and laundered before re-use. Seek medical attention if irritation develops.
Eye Contact:	IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention immediately.
Ingestion:	IF SWALLOWED: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

#### 5. FIRE FIGHTING MEASURES

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Flammability Summary (OSHA):	Product is not known to be flammable, combustible, pyrophoric or explosive.
<u>Flammable Properties</u>	
Flash Point:	Not applicable
Autoignition Temperature:	Not applicable
Fire / Explosion Hazards:	This material is not expected to burn unless all the water is boiled away. The remaining compounds may be ignitable.
Extinguishing Media:	Choose extinguishing media suitable for surrounding materials.
Fire Fighting Instructions:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.
Hazardous Combustion Products:	Carbon monoxide, Carbon dioxide
Upper Flammable / Explosive Limit, % in air:	No data
Lower Flammable / Explosive Limit, % in air:	No data



## 6. ACCIDENTAL RELEASE MEASURES

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Personal Protection for Emergency Situations: Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus.

### Spill Mitigation Procedures

Air Release:

Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Water Release:

This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Land Release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Do not place spill materials back in their original containers. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.

Additional Spill Information :

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

## 7. HANDLING AND STORAGE

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Handling:

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.

Storage:

Store in a cool, dry and well ventilated place. Isolate from incompatible materials. Avoid freezing.

Incompatible Materials for Storage:

Refer to Section 10, "Incompatible Materials."

Empty Container Warning:

Empty containers retain hazardous residue, dispose of accordingly.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Ventilation:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

### Protective Equipment for Routine Use of Product



Respiratory Protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.  
Respirator Type : A NIOSH approved air purifying respirator with organic vapor cartridge and N95 particulate filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.  
Skin Protection : Wear impervious gloves to avoid skin contact.  
Eye Protection: Use chemical goggles and a faceshield.  
Protective Clothing Type: Impervious  
General Protective Measures: An eye wash and safety shower should be provided in the immediate work area.

Exposure Limit Data

<u>CHEMICAL NAME</u>	<u>CAS #</u>	<u>Name of Limit</u>	<u>Exposure</u>
Butoxyethanol	111-76-2	ZUS_ACGIH	20 ppm TWA
Butoxyethanol	111-76-2	ZUS_OSHAPO	25 ppm TWA 120 mg/m3 TWA
Butoxyethanol	111-76-2	ZUS_OSHAP1	50 ppm TWA 240 mg/m3 TWA
Butoxyethanol	111-76-2	NIOSH-IDLH	700 ppm

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical State: liquid  
Form: liquid  
Color: clear  
Odor: Heavy detergent odor  
Molecular Weight: Not applicable/Mixture  
Specific Gravity : 1.1380  
pH : 1.0 - 3.0 (@ 25 Deg. C)  
Boiling Point: 101 DEG°C / 215 DEG°F  
Freezing Point: 0 DEG°C / 32 DEG°F  
Melting Point: No data  
Density: 1.1380g/cc  
Vapor Pressure: 17.00000000 (@ 25 Deg. C)  
Vapor Density: No data  
Viscosity: Not applicable  
Fat Solubility: No data  
Solubility in Water: soluble  
Partition coefficient n-octanol/water: No data  
Evaporation Rate: Approximately 1.00  
Oxidizing: No data  
Volatiles, % by vol.: No data  
VOC Content: No data



HAP Content                      No data

## 10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:      Stable under normal conditions. Not sensitive to mechanical shock. Not sensitive to static discharge. Product will not undergo hazardous polymerization.

Conditions to Avoid:                      High temperatures, Avoid freezing.

Chemical Incompatibility:                Strong oxidizing agents, strong acids, strong alkalies

Hazardous Decomposition Products:    Carbon monoxide, Carbon dioxide, phosphorus oxides

Decomposition Temperature:            No data

## 11. TOXICOLOGICAL INFORMATION

### Component Animal Toxicology

#### Oral LD50 value:

Citric Acid	LD50 = 3,000 mg/kg	rat
Butoxyethanol	LD50 = 1,590 mg/kg	Rat
ETIDRONIC ACID	LD50 = 1,440 mg/kg	Rat
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.	LD50 = 4,000 mg/kg	Rat

#### Dermal LD50 value:

Citric Acid	LD50	Believed to be > 2,000 mg/kg	rabbit
Butoxyethanol	LD50	= 580 mg/kg	Rabbit
ETIDRONIC ACID	LD50	> 4,764 mg/kg	Rabbit
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.	LD50	> 2,000 mg/kg	Rabbit

#### Inhalation LC50 value:

Citric Acid	no data available
Butoxyethanol	Inhalation LC50 4 h      486 ppm    Rat
ETIDRONIC ACID	No data
POLY(OXY-1,2-ETHANEDIYL), .ALPHA.-(NONYLPHENYL)-.	Inhalation LC50    No data

### Product Animal Toxicity

<u>Oral LD50 value:</u>	LD50	Believed to be approximately 3,700 mg/kg	rat
<u>Dermal LD50 value:</u>	LD50	Believed to be approximately 1,700 mg/kg	rabbit
<u>Inhalation LC50 value:</u>	no data available		

Skin Irritation:                      This material is expected to be moderately irritating.

Eye Irritation:                        This material is expected to be corrosive.

Skin Sensitization:                    This material is not known or reported to be a skin or respiratory sensitizer.



Acute Toxicity: This product is corrosive to the eyes, moderately irritating to the skin and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Subchronic / Chronic Toxicity: Not known or reported to cause subchronic or chronic toxicity.

Reproductive and Developmental Toxicity: Not known or reported to cause reproductive or developmental toxicity.

Citric Acid This chemical has been tested in laboratory animals and there was no evidence of reproductive toxicity or teratogenicity.

Butoxyethanol Reproductive toxicity occurred in laboratory animals only at doses that were maternally toxic.

ETIDRONIC ACID This product has been tested and was shown not to produce any adverse effects on reproductive function or fetal development when administered to laboratory animals.

Mutagenicity: Not known or reported to be mutagenic.

Citric Acid This product was determined to be non-mutagenic in the Ames assay. It was also shown to be negative in the Dominant lethal assay.

Butoxyethanol This material has been shown to be non-mutagenic in the majority of a battery of assays. Not expected to be a mutagenic hazard.

ETIDRONIC ACID This chemical has been tested and was shown to be non-mutagenic.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Citric Acid The carcinogenicity has been evaluated through animal study and it was found not to be carcinogenic.

Butoxyethanol This material has been classified by the U.S. EPA as a "Group C" carcinogen (Suggestive Human Carcinogen), based on equivocal and limited evidence in laboratory animals. The International Agency for Research on Cancer (IARC) has classified this product or a component of this product as a Group 3 substance, Unclassifiable as to Its Carcinogenicity to Humans.

ETIDRONIC ACID This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA. Chemicals of similar structure have been shown not to cause cancer in laboratory animals.

## 12. ECOLOGICAL INFORMATION

Overview: No data for product. Individual constituents are as follows:



Ecological Toxicity Values for: Citric Acid

- Lepomis macrochirus (Bluegill sunfish) - (static). 96 h LC50 = 1,516 mg/l  
Daphnia magna (Water flea) - 72 h EC50 Approximately 120 mg/l

Ecological Toxicity Values for: ETIDRONIC ACID

- Bluegill - 96 h LC50 = 868 mg/l  
Rainbow trout (Salmo gairdneri), - 96 h LC50 = 368 mg/l  
Channel Catfish (Ictalurus punctatus rafinesque), - 96 h LC50 = 695 mg/l  
Sheepshead minnow - 96 h LC50 = 2,180 mg/l  
Daphnia magna, - 48 h EC50= 527 mg/l  
Grass shrimp - 96 h LC50= 1,770 mg/l  
Oyster Shell Deposition - 96 h EC50= 89 mg/l  
Mallard duck - Oral LD50 > 2,510 mg/kg  
Bobwhite quail - Oral LD50 > 2,510 mg/kg

### 13. DISPOSAL CONSIDERATIONS

**CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.**

Waste Disposal Summary : If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D002.

Disposal Methods : As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : D002

### 14. TRANSPORT INFORMATION

Land (US DOT): Not Regulated NOT REGULATED AS A DOT HAZARDOUS MATERIAL  
Water (IMDG): UN3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (ETIDRONIC ACID) 8 III Marine Pollutant: No

Air (IATA): Flash Point: Not applicable  
UN3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S., (ETIDRONIC ACID) 8 III

Emergency Response Guide Number: Not applicable





Transportation Notes: Product not regulated for ground transport in the USA per exception permitted in 49 CFR 173.154(d).

EMS: F-A, S-B

## 15. REGULATORY INFORMATION

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### UNITED STATES:

Toxic Substances Control Act (TSCA): The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPA Pesticide Registration Number: None established

FIFRA Listing of Pesticide Chemicals (40 CFR 180): Not registered in the US under FIFRA.

### Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):

Health Immediate (Acute) Health Hazard

Physical None

### Emergency Planning & Community Right to Know (40 CFR 355, App. A):

#### Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

ZUS_SAR302	TPQ (threshold planning quantity)	None established
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#### Reportable Quantity (49 CFR 172.101, Appendix):

ZUS_CERCLA	Reportable quantity	GLYCOL ETHERS Value:
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ZUS_SAR302	Reportable quantity	None established
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### Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

ZUS_SAR313	De minimis concentration	Glycol ethers (Non-carcinogenic) Value: 1%
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### Clean Air Act Toxic ARP Section 112r:

CAA 112R	None established
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### Clean Air Act Socmi:

HON SOC

US. EPA Hazardous Organic NESHP (HON) Synthetic Organic Chemicals (40 CFR 63.100-.106, Table 1)  
07 1999



Group I  
ETHYLENE GLYCOL MONOBUTYL ETHER

**Clean Air Act VOC Section 111:**  
CAA 111

US. EPA Clean Air Act (CAA) Section 111 SOCM I Intermediate or Final Volatile Organic Compounds (40 CFR 60.489)  
01 1996  
2-BUTOXYETHANOL

**Clean Air Act Haz. Air Pollutants Section 112:**  
ZUS\_CAAHAP                      None established

ZUS\_CAAHRP                      None established

CAA AP

US. EPA Hazardous Organic NESHAP (HON) Hazardous Air Pollutants (40 CFR 63.100-.106, Table 2)  
04 1999  
GLYCOL ETHERS

**State Right-to-Know Regulations Status of Ingredients**

**Pennsylvania:**

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol

ZUSPA\_RTK

Pennsylvania: Hazardous substance list  
1989-08-11  
ETHANOL, 2-BUTOXY-

**New Jersey:**

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol

ZUSNJ\_RTK

New Jersey Right to Know Hazardous Substance List (RTK-HSL)  
2007-03-01  
2-BUTOXY ETHANOL ETHYLENE GLYCOL MONOBUTYL ETHER ETHANOL, 2-  
BUTOXY- BUTYL CELLOSOLVE  
Special Health Hazard - Carcinogen

**Massachusetts:**

CAS #	COMPONENT NAME
111-76-2	Butoxyethanol

ZUSMA\_RTK



Massachusetts Right to Know List of Chemicals and Hazard Classifications

1993-04-24

2-BUTOXYETHANOL BUTYL CELLOSOLVE ETHYLENE GLYCOL MONOBUTYL  
ETHER

**California Proposition 65:**

CAS #	COMPONENT NAME
ZUSCA_P65	None established

**WHMIS Hazard Classification:**

Ingredient Disclosure List (WHMIS)

1988-01-20

Threshold limits: 1 Weight %

409

CITRIC ACID

Ingredient Disclosure List (WHMIS)

2007-08-24

Threshold limits: 1 Weight %

824

Ethylene glycol monobutyl ether

## 16. OTHER INFORMATION

MSDS REVISION STATUS : Revised to meet the ANSI standard of 16 sections

SECTIONS REVISED: 3, 8, 11

Major References : Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .